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ZOÖLOGICAL RESULTS OF THE THAYER BRAZILIAN  
EXPEDITION.

PRELIMINARY DESCRIPTIONS OF NEW GENERA  
AND SPECIES OF TETRAGONOPTERID  
CHARACINS.

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No. 6. — *Zoölogical Results of the Thayer Brazilian Expedition. Preliminary descriptions of New Genera and Species of Tetragonopterid Characins.*<sup>1</sup>

By CARL H. EIGENMANN.

THE following species, mostly collected during the Thayer Expedition, will be fully described and figured in a monograph of the Characidae to appear in the Memoirs of the Museum of Comparative Zoölogy.

The monograph will be issued at irregular intervals, and the account of the Tetragonopterinae, which forms the first section of the systematic part of the monograph, will be delayed on account of the desirability of securing material from some of the South American rivers flowing north into the Caribbean.

**Gymnocorymbus, gen. nov.**

Resembling *Moenkhausia*, from which it differs in the naked predorsal line.

TYPE. — *Gymnocorymbus thayeri*, sp. nov.<sup>2</sup>

**Gymnocorymbus thayeri, sp. nov.**

Head 3.5 (average); depth 1.7 (average); D. 11; A. 34-41, usually 37 or 38.

Very deep and very much compressed; the ventral outline much greater than the dorsal, pendant, deepest at origin of anal.

Snout very short, mouth very oblique.

Scales cycloid, regularly imbricate.

Color similar to that of *Tetragonopterus argenteus*. A dark humeral bar followed by a lighter area, and this again by a bar less well-marked than the first; area between the two bars, just above lateral line, bright silvery. Lower sides brassy; fins hyaline to uniform dusky.

Males with hooklets on anal.

<sup>1</sup> Contributions from the Zoölogical Laboratory of Indiana University, No. 99.

<sup>2</sup> In memory of S. V. R. Thayer, a volunteer of the Thayer Expedition.

Second air-bladder more or less boot-shaped.

One hundred specimens, Amazons from Tabatinga to Gurupa.

**Thayeria**, gen. nov.<sup>1</sup>

Small, elongate Tetragonopterids, reaching a length of nearly 80 mm., distinguished from all others by the unequally lobed caudal.

Near Hemigrammus and Creatochanes.

TYPE. — *Thayeria obliquus*, sp. nov.

**Thayeria obliquus**, sp. nov.

Head about equal to depth, 2.6 (in young)—3 in the length. D.  $10\frac{1}{2}$ –11; A. 16 or 17, rarely 15 or 18.

Little compressed, elongate, at occiput little deeper than length of head.

Brassy; anterior anal lobe dusky; a light bar from base of upper caudal rays obliquely to tips of the three short rays above the middle; a dark band from middle of caudal forward; no humeral spot.

Many specimens, 47–76 mm. ♂, ♀, Obidos.

**Ctenobrycon**, gen. nov.

This genus differs from all other Tetragonopterinae by its ctenoid scales, which are especially rough on the breast. In other respects it resembles the deeper species of *Astyanax*.

TYPE. — *Tetragonopterus hauxwellianus* Cope.

**Astyanax asymmetricus**, sp. nov.

Distinguishable from all other members of the genus by the triangular, asymmetrically placed, caudal spot.

Head 3.3–3.7; depth 3–3.3; D. 11; A. 30, 32, and 28; scales 11 or 12–54 or 55–59; eye 2.5–2.75 in the head; interorbital 3.1–3.75.

Compressed, symmetrically elliptical to the slender caudal peduncle. Occipital process about one-fourth the distance of its base from the dorsal. Snout long and pointed. Maxillary long and slender, about as long as the eye. Three or four teeth in front row of premaxillary, — if four the third is out of line; five teeth in second series, the denticles arranged in a nearly straight line; two very minute teeth on the maxillary. Mandible half length of head.

All but the tips of the middle caudal rays black, the spot continued obliquely downward on end of caudal peduncle to its lower edge, otherwise immaculate.

Three specimens, 40 to 51 mm. long. Tabatinga.

<sup>1</sup> In memory of Nathaniel Thayer, through whose liberality most of the species described in this paper were collected.

***Astyanax symmetricus*, sp. nov.**

Allied to *A. asymmetricus*, *A. anterior*, and *A. zonatus*. Distinguished by the absence of a humeral spot and the nearly symmetrical caudal spot. Most nearly like *A. zonatus*, from which it differs, among other things, by the striation of the scales.

Head 2.66; depth  $2\frac{7}{11}$ ; D. 11; A. 30; scales 8-48-6; eye 3; interorbital 2.66.

Brassy; a silvery lateral band; no trace of a humeral spot; middle caudal rays dark, the chromatophores scattered over base of neighboring rays.

One specimen, 74 mm. long. Tabatinga.

***Astyanax zonatus*, sp. nov.**

Allied to *anterior* and *asymmetricus*; distinguishable from other members of the genus by a caudal "cross-bar."

Head 3.8; depth 3; scales 8 or 9-42 to 47-5 or 6; D. 11; A. 27-30; eye 2.56 in head; interorbital about equal to eye.

A faint vertical humeral spot, a spur of it crossing the third scale of the lateral line; end of caudal peduncle whitish; a broad, dark bar crossing base of caudal, blackest in the centre, where it is continued to the end, or nearly to the end of the middle rays. A narrow, silvery lateral band.

Alimentary canal not quite equal to the entire length.

Six specimens, 34 (to base of caudal) to 59 mm. long. Tabatinga.

***Astyanax anterior*, sp. nov.**

Allied to *A. asymmetricus*; distinguishable from all other species of *Astyanax* by the anterior position and sublinear character of its humeral spot.

Head 3.5; depth 2.8; D. 11; A. 28-32; scales 9.5 or 10-52 or 53-56; eye 3+; interorbital 3.

A silvery lateral band about three in the eye; a horizontal black spot one-fourth as wide as eye and rather longer than the eye, beginning on upper part of the first scale of the lateral line and extending straight, pointed behind; middle caudal rays black. Otherwise plain.

Two specimens, 70 to 91 mm. long. Tabatinga.

***Astyanax bourgeti*, sp. nov.<sup>1</sup>**

A well-marked species, differing from all others of the genus in the black lower fins.

Head 3.33; depth 2.33; D. 11; A. 34; scales 12-53-9; eye a little less than  $\frac{1}{3}$  length of head; interorbital 2.47:

<sup>1</sup> In memory of Monsieur Bourget, who collected the species described as new in this paper from Tabatinga.

A large, well-defined, horizontally ovate humeral spot on upper part of first to fifth scale of lateral line, and above those scales a conspicuous silvery spot on its upper, anterior corner; a narrow, faint silvery band; a conspicuous black spot, about as large as the pupil on base of middle caudal rays; tips of middle half of caudal rays dusky; anal nearly uniformly dark; pectorals and ventrals profusely dotted, nearly black.

One specimen, 92 mm. long. Tabatinga.

***Astyanax bimaculatus borealis*, var. nov.**

*Tetragonopterus maculatus* Steindachner, Fischf. Magd. Stromes, 1878, 42, Rio Magdalena; Fischf. Cauca & Flüsse Guayaquil, 1880, 21, Cauca. In nine specimens from the Cauca and Magdalena Steindachner had one with 32 anal rays, three with 38, and the rest with between 36-39. This gives 38 as the usual number, and the average 37. The nearest average in any other locality is 32.2. This difference is worthy of nominal recognition.

***Astyanax janeiroensis*, sp. nov.**

This species is closely related to *A. bimaculatus*, but differs conspicuously from typical specimens from Rio de Janeiro in its much more elongate form.

Head 4; depth  $2\frac{2}{3}$ ; D. 11; A. 27; scales 6-38-5; eye 3.5; interorbital  $2\frac{2}{3}$ ; two maxillary teeth.

Anal basis equals the space between the dorsals (greater than distance from base of last dorsal ray to tip of adipose in all specimens of *A. bimaculatus* from Rio). Width of body  $2\frac{4}{11}$  in the depth, (3-3.4).

A faint basal caudal spot, not continued on the middle rays.

One specimen, 92 mm. Rio de Janeiro.

***Astyanax goyacensis*, sp. nov.**

This specimen differs from all specimens of *A. bimaculatus* from Goyaz in the shape, so that it could not be confounded with them. It is much more elongate and heavier forward.

Head 4; depth  $2\frac{2}{3}$ ; D. 11; A. 25; scales 7-38-5; eye 3.4; interorbital 2.25; width of body  $2\frac{7}{11}$  in its depth (over three in *A. bimaculatus*). Jaws equal (teeth of outer row of premaxillary exposed in the closed mouth in *A. bimaculatus*); second suborbital covering entire cheek (leaving a naked margin in *A. bimaculatus*).

The narrow caudal spot continued to end of middle rays.

One specimen, 76 mm. (to base of caudal). Goyaz.

***Astyanax brevirohinus*, sp. nov.**

Distinguished by the blunt snout.

Head  $3\frac{2}{3}$ ; depth 2.4; D. 11; A. 28; scales 6-35-4; eye 2.5; interorbital 3.

Compressed, dorsal and ventral profiles equally arched.

A silvery lateral band, an obscure humeral spot; middle caudal rays hyaline with traces of color, the tips dark, the caudal lobes opaque.

One specimen, about 68 mm. long. Rio Jequitinhonha.

***Astyanax giton*, sp. nov.**

These two specimens are *Astyanax taeniatus*, with a blunt snout. The larger may be considered the type. They differ from *A. brevihinus* in the color of the caudal and the shape of the occipital process.

Head 4; depth 2.5-2.6; D. 11; A. 23-24; scales 5-35-4; eye 2.5; interorbital 2.75-3.

Occipital process not nearly so narrow as in *A. brevihinus*; snout a little more than half as long as the eye.

A prominent humeral spot crossing the third scale of the lateral line; a large spot at base of caudal continued to tips of the middle rays. Otherwise as in *A. brevihinus*.

Two specimens, about 68 to about 78 mm. Rio Parahyba.

***Astyanax albeolus*, nom. nov.**

*Astyanax oerstedii* Meek, not Kröyer, Field Columbian Museum, Publication 1907, vol. 7, p. 145.

Head 4.5; depth 2.66; D. 11; A. 26; scales 7-38-7; eye equal to snout, 3.5 in head; interorbital  $\frac{1}{2}$  the head's length behind the second nareal opening.

A vertically oval humeral spot, the ventral prolongation scarcely evident, crossing the third and fourth scales of the lateral line. Dorsal whitish, having very few chromatophores; anal lobe without chromatophores, the rest of the fin with a few.

Very closely related to *A. globiceps*.

One specimen, 116 mm. Rio Machuca, Rio Siguire, Costa Rica.

***Astyanax fasciatus parahybae*, subsp. nov.**

The specimens from the Parahyba basin differ from typical *A. fasciatus* in so many and so striking respects that they may also be distinguished by a varietal name.

Head 4.25-4.4; depth 2.5-2.66; D. 11; A. usually 31 or 32 (27-34 in *A. fasciatus*); lateral line usually 39 or 40 (37-41).

Rows of scales below the lateral line deflected toward the anal by interpolated rows of scales, the first of the interpolated rows beginning at a point above middle of ventrals and one or two rows of scales below the lateral line.

Tips of dorsal, caudal rays, and anal usually dark; tips of ventrals, sometimes

and more rarely, the tips of the pectorals, also dusky; middle caudal rays dark; tips of first 2 rays of anal milk-white.

Many specimens, 36-138 mm. Rio Parahyba, Mendez, Muriahe, and Taubeté.

***Astyanax scabripinnis intermedius*, subsp. nov.**

The true *A. scabripinnis* shades into the *A. taeniatulus* Jenyns in these specimens. We have the elongate form, depth (about 3) of *A. scabripinnis*; the eye is larger, being about 2.5-2.75, rarely 3, in the head; head slender, pointed. A. 21 to 24 in the Parahyba specimens, 23 to 26 in the Santa Clara specimens; scales 37 to 39 from the Parahyba, lost from the Santa Clara specimens.

Many specimens, 38-113 mm. long. Rio Parahyba and Santa Clara.

***Astyanax multidentis*, sp. nov.**

One of the smallest species of the genus. Distinguished from its relatives *gracilior* and *paucidentis* by the large number (5) of maxillary teeth, and the large second suborbital.

Head about 3.75; depth 3.33-3.25; D. 11; A. 24-26; scales 5 or 6-32 to 34-4; eye about 2.5 in head; interorbital about 3.

Straw colored in alcohol; a vertical, humeral spot above third and fourth scales of the lateral line; a narrow, silvery band, overlying a black line; caudal with the distal part of its middle rays dark, the black of the caudal separated by an interspace from the black line of the sides; tip of highest dorsal and anal rays sometimes milk-white; fins otherwise without markings.

Many specimens, 27 (to base of C.)-32 mm. (to base of C.). Obidos, and Silva, Lake Saraca.

***Astyanax gracilior*, sp. nov.**

Closely related to *multidentis*. The caudal spot is much more prominent, extending to the base of the rays; humeral spot very faint; depth 3.5-4; maxillary teeth three, about 5-pointed; five large dentary teeth; three teeth in outer row of premaxillary in two of the specimens, five in one; pectorals not reaching ventrals. A. 22-24; lateral line 36-37.

Three specimens, 35-63 mm. long. Obidos and Villa Bella.

***Deuterodon pedri*, sp. nov.**

Head 4-4.33; depth about 3; D. 10 or 11; A. 22-27.

A little more slender than *D. iguape*. Second suborbital leaving a wide naked area; maxillary with 2 or 3 teeth.

A humeral spot, a silvery lateral band, and a large caudal spot continued, *apparently*, to end of middle rays.



To this species probably belong many specimens, 21-41 mm. long (to base of caudal) from Santa Cruz, collected by Dom Pedro II. On account of the poor condition of the types an absolute identification is impossible.

Seven specimens, 73-100 mm. long, in very poor condition, are undoubtedly a species of *Deuterodon* distinct from *D. iguape*.

***Deuterodon parahybae*, sp. nov.**

Head 3.5-4; depth 2.5-3; D. 11; A. 24-26, usually 25.

Compressed elliptical; caudal peduncle as high as long. Second suborbital leaving a very narrow naked area; maxillary with 2 or 3 teeth; scales mostly fallen off, cycloid, with several slightly diverging striae.

A well-defined vertical, humeral spot; a large caudal spot, the middle caudal rays black.

Eight specimens, 46-53 mm. Itapemirim, Hartt & Copeland.

***Pristella*, gen. nov.**

This genus differs from *Hemigrammus* as *Hemibrycon* differs from *Astyanax*.

Lateral line incomplete; caudal naked? Premaxillary with two series of teeth, those of the outer series with parallel margins, a prominent, broad, central lobe and two receding shoulders, the teeth becoming conical toward the sides, the posterior series within margin of jaw 1-pointed or 3-pointed incisors, with the middle much the higher; maxillary with minute conical teeth scattered along most of the margin; lower jaw with a single series of teeth, imperfectly tricuspid, the points broad, not unlike those of the upper jaw, graduated, the lateral teeth minute, conic; snout and maxillary 2-2.5 in head; gill-rakers long, setiform; gill membranes free from each other and from isthmus.

TYPE. — *Holopristes riddlei* Meek.

***Psellogrammus*, gen. nov.**

Allied to *Hemigrammus*, but with the lateral line extending with interruptions to the caudal, the anal originating under the origin of the dorsal or still further forward.

TYPE. — *Hemigrammus kennedyi* Eigenmann.

***Hemigrammus coeruleus* DURBIN, sp. nov.<sup>1</sup>**

Head 3.5; depth 2.75; D. 11; A. 20-22; scales 5-31 or 32-3½, 7 or 8 with pores; eye 2.5-2.66 in head; interorbital equal to eye. Maxillary a little longer than the eye, with four or five, sometimes two or three, tricuspid teeth.

<sup>1</sup> The descriptions of the species of *Hemigrammus* and of *Hypheobrycon* are the work of Miss Marion Lee Durbin, an able and earnest student of the Characins.

A highly iridescent-blue stripe along one row of scales between base of pectoral and middle of anal fin.

Distal  $\frac{2}{3}$ - $\frac{3}{4}$  of dorsal much darkened, especially in males; distal half of the first five, and tips of most of the remaining anal rays, the middle caudal rays, and the ventrals, also blackish. A silvery lateral band,  $\frac{2}{3}$  of a scale wide from eye to caudal, below which is a grayish-brown stripe, faint and terminating in the middle of the caudal fin. A vertically elongate, roughly diamond-shaped, humeral spot, margined on each side by a faint, silvery line. Pale, bluish-gray iridescence below the stripes.

One hundred and three specimens, 42-52 mm. long (the type of 46 mm.) Manacapuru. Wm. James.

#### **Hemigrammus levis** DURBIN, sp. nov.

Head 3.5-3.66; depth 3.2-3.6; D. 11, rarely 10; A. 17-20; scales 5-30 to 34-3 $\frac{1}{2}$ , 5 to 11 with pores; eye 2.5-2.66 in head; interorbital slightly less than eye.

Maxillary without teeth; a round caudal spot, other fins plain; a slaty-black lateral band below the dorsals and a silvery band below it.

Over 300 specimens, 33-47 mm. long. Lago do Maximo, Obidos, Villa Bella, Lake Jose Assu.

#### **Hyphessobrycon** DURBIN, subgen. nov.

This genus is a *Hemigrammus* with a naked caudal.

TYPE. — *Hyphessobrycon compressus* (Meek).

#### **Hyphessobrycon compressus milleri** DURBIN, subsp. nov.

Sides of head and body everywhere with numerous chromatophores; dorsal dark. Maxillary considerably less than the length of the eye. Second suborbital covering two-thirds of cheek, otherwise as in *H. compressus*.

One specimen, 40 mm. long. Los Amates, Guatemala.

#### **Hyphessobrycon serpae** DURBIN, sp. nov.

Head 3.5; depth 2 $\frac{3}{4}$ -3; A. 27-30. D. 10, rarely 11; scales 5-5+24-3 $\frac{1}{2}$ ; eye 2.5-2.75; interorbital 3+.

A round, black spot of variable size on the dorsal, margined above on the second and third rays with white and below by a narrow white bar, which is widest on the first ray. Bases and tips of all the rays but the first without pigment; a sub-marginal bar of black on the first anal rays, and distinct marginal bar on the last rays. Some specimens with the intermediate rays also tipped with black. A humeral spot.

20985. Forty-six specimens, 26-30 mm. long. Serpa.

***Hyphessobrycon copelandi* DUBBIN, sp. nov.<sup>1</sup>**

Head 3.5-3.8; depth 3-3.2; D. 11; A. 28; scales 5-7+24 to 27-3 $\frac{1}{2}$ ; eye 2.25-2.33; interorbital 2.8-3. Five teeth in the second row of the premaxillary. First six rays of the dorsal with a submarginal black bar, bordered above and below with chalky white. Anal usually plain. A vertical humeral spot. Margin of caudal dusky. Outer rays of ventrals and pectorals chalky-white.

A hundred specimens, 29-42 mm. long. Tabatinga.

***Hyphessobrycon bentosi* DUBBIN, sp. nov.<sup>2</sup>**

Distinguished by having eight teeth in the inner series of the premaxillary.

Head 3.33-3.5; depth 2 $\frac{5}{8}$ -3 $\frac{1}{6}$ ; D. 11; A. 27-30; scales about 30-33; eye 2.5; interorbital less than eye.

First three dorsal rays tipped with white; a black spot bordered by white on distal half of the second to the sixth ray; basal part of dorsal hyaline; a humeral spot, no caudal spot.

Twenty-one specimens, 30-38 mm. long. Obidos.

***Hyphessobrycon panamensis* DUBBIN, sp. nov.**

Head 3.4; depth 2.8; D. 11; A. 25; scales 7-12+24-6; eye 2.25 in head; snout 4; interorbital 3.

Upper scales margined with dusky; a dusky lateral band; first half of anal tipped with black, other fins plain.

Seven specimens, 29-32 mm. long. Panama.

One specimen, 32 mm. Boqueron River, Panama.<sup>3</sup>

***Hyphessobrycon melazonatus* DUBBIN, sp. nov.**

Head 3.5; depth 2.66-2.5; D. 11; A. 22; scales 5-34-3.5; eye 2.66 in head; interorbital equals eye; a narrow naked border on the cheek.

Webs of the dorsal and sometimes those of the first seven or eight anal rays dusky; caudal peduncle largely dark; a very faint humeral spot.

One specimen, 38 mm. long. Lago do Maximo.

One specimen, 34 mm. Silva, Lake Saraca.

***Moenkhausia latissimus*, sp. nov.**

Resembling *M. steindachneri* in coloration and compressed preventral region and keeled predorsal area. Distinguished by the entire scales, the small nuchal scale and much longer anal, etc.

<sup>1</sup> In memory of Herbert Copeland of the Thayer Expedition.

<sup>2</sup> In memory of Colonel Bentos, a volunteer of the Thayer Expedition.

<sup>3</sup> This specimen was submitted for examination by Dr. B. W. Evermann.

Head 3.75; depth 2 (average); D. 11; A. 33-35.

Form very deep, compressed. Occipital process narrow, long.

No caudal spot; a well-defined, narrow, but very long humeral spot reaching from above the third to above the ninth scale of the lateral line.

Many specimens, 55-92 mm. Tabatinga.

**Moenkhausia jamesi**, sp. nov.<sup>1</sup>

Head 4; depth 2.2; D. 11; A. 33-35.

Deep, compressed. Occipital process moderate.

A dark, vertical caudal spot on base of all but the outermost rays, not continued on middle rays. A silvery lateral band half as wide as eye. An ill-defined, vertical humeral spot of scattered cells over the space between fourth and seventh scale of lateral line. No other dark markings. Iridescent silvery and brassy (except in a vertical area, three scales wide and about six high, beginning at the third scale of the lateral line).

Five specimens, Iça Obidos, Lago do Maximo, Tajapurú.

**Monkhausia comma**, sp. nov.

This species is readily distinguished by the elevated dorsal and peculiar humeral spot.

Head 3.4; depth 2 +; D. 11; A. 26.

Deep, compressed, subrhomboidal, the anal basis much steeper than the predorsal profile.

A well-defined horizontal, comma-shaped humeral spot above the first seven scales of the lateral line; a very narrow, silvery lateral line; upper posterior parts of the interradial membranes of dorsal dark, other fins hyaline.

Two specimens, 77 mm. Cudajas.

**Moenkhausia justae**, sp. nov.<sup>2</sup>

It differs from *jamesi* in having a tooth on the maxillary, the tooth 4-or 5-pointed; four teeth on each side of the lower jaw.

A. 31; scales 7-36-6; the second preorbital much narrower than in *M. jamesi*.

One specimen, 60 mm. from Dr. Justa through Major Cotonho.

**Moenkhausia melogrammus**, sp. nov.

Readily distinguished by the depth and by the black line along base of anal.

Head 4; depth 2.5; D. 11 (divided ray counted as 2); A. 26.

Compressed, dorsal and ventral outlines nearly equal.

<sup>1</sup> For William James, a member of the Thayer Expedition.

<sup>2</sup> For Dr. Justa.

Third tooth of the outer series of the premaxillary entirely withdrawn from the line of the rest.

A black line along base of anal; a faint dark line along the sides, otherwise faintly silvery, without spots.

One specimen, 40 mm. (to base of caudal). Tabatinga.

**Moenkhausia australe**, sp. nov.

Differs from *oligolepis* in number of scales in the lateral line, 24-26.

Two specimens, 33-41 mm. long. Arroyos Trementina and Chagalalina.

One of the few species of this genus extending south of the Amazon.

**Moenkhausia barbouri**, sp. nov.<sup>1</sup>

Very similar to *M. heterolepis*, the striae of the scales different and the caudal lobes dark.

Head 4.2-4.3; depth 2.4; D. 11; A. 30-33.

Compressed, moderately deep; dorsal and ventral profiles symmetrically curved.

Four or more diverging striae on each of the lateral scales.

A faint, vertical humeral spot; tips of caudal lobes and middle rays faintly dusky; a well-defined silvery lateral band two-thirds as wide as the eye; sides iridescent silvery.

Two specimens, 62 and 66 mm. Villa Bella.

**Moenkhausia dichrourus intermedius**, subsp. nov.

These typically colored specimens have a slender maxillary whose anterior margin is not greatly arched; the premaxillary has a much greater anteroposterior extent than in typical *dichrourus*. Occipital process  $\frac{1}{3}$  the space from its base to the dorsal.

Two specimens, 42 to 64 mm. Tabatinga.

**Moenkhausia lepidurus latus**, subsp. nov.

These specimens differ from others from the Tapajos, and from various other localities. Anal rays average 26+. Body deeper, the depth averaging 2.6 of the length.

Middle caudal rays faintly colored, if at all; upper caudal lobe black.

Many specimens, 55 to 75 mm. Rio Tapajos.

**Moenkhausia lepidurus içae**, subsp. nov.

Deep, compressed; depth 3; anal rays usually 23 or 24.

Upper caudal lobes and sometimes distal part of other rays dusky; a very

<sup>1</sup> For Mr. Thomas Barbour of Cambridge.

small, well-defined humeral spot of about ten chromatophores; tip of anal lobe sometimes milk-white.

Many specimens, 30 to 50 mm. long. Iça.

**Moenkhausia lepidurus gracilimus**, sp. nov.

Anal averaging 22 rays; depth 4 or nearly 4.

Color of caudal as in typical individuals of *lepidurus* but faint, with a duskiess extending upon the lower caudal lobe.

Humeral spot, even in the smallest examples, of over 20 chromatophores, not well defined.

Also seventeen specimens, 47-59 mm. long, from Villa Bella.

Middle caudal rays and distal part of the other rays, and upper and lower edges of the fin, dusky; tip of anal lobe sometimes milk-white; humeral spot of many chromatophores, extending upward from second and third or third and fourth scales.

These specimens are appreciably different from the typical *M. gracilimus*, but gradations between them are almost perfect.

Twenty-one specimens, about 39 to 57 mm. Serpa.

**Moenkhausia cotinho**, sp. nov.<sup>1</sup>

Distinguished by the slender form combined with the broad, basal caudal bar.

Head  $3\frac{2}{3}$ - $3\frac{3}{4}$ ; depth 3+; D. 11; A. 20 or 21; scales 5-32-3.5.

Elongate, not strongly compressed or elevated.

Occipital process short, reaching one-sixth the distance to dorsal.

Three or four teeth in outer series of the premaxillary, five teeth in the second; two teeth in the premaxillary. Lower jaw with four large teeth followed by a much smaller, recurved tooth and a number of minute teeth.

Brassy, the fins dusky; a very large and very conspicuous vertically oval black spot on base of caudal, bordered behind by milk-white.

Three cotypes 67-71 mm. from Para, Thayer Expedition, are much paler; the caudal spot, although covering the same area, is very faint except that part not covered by the caudal scales.

Two specimens, 46 and 54 mm. Dr. Justa, by Major Cotinho.

**Moenkhausia ceros**, sp. nov.

Distinguished by the caudal spot and the short anal.

Head 4; depth 3.25; D. 11; A. 19; scales 5-33-3.

Elongate, compressed; dorsal and ventral profiles gently curved. Occipital process short, reaching about one-sixth to dorsal, bordered by three scales on each side.

Four teeth in the front series of the premaxillary, inner series of six graduated teeth; four large, graduated teeth in the lower jaw, and numerous small ones.

<sup>1</sup> For Major Cotinho, Brazilian attaché of the Thayer Expedition.

Third anal ray of ♂ (i. e., the first fully-developed ray) provided with a large retrorse hook on each side.

A faint, ill-defined, silvery lateral band with a gray line above it. Middle caudal rays jet black, the color spreading over base of fin. Scales and fins minutely punctate. Sides brassy, iridescent. No humeral spot.

One specimen, 50 mm. long. Lake Hyanuary.

**Bryconamericus heteresthes**, sp. nov.

The most slender species of the genus.

Head 4½; depth 3.75-4.25; D. 10 (everything counted); A. usually 19.

Slender, very little compressed, the width about one-half the depth.

Occipital process very short, about 8 in the space from its base to the dorsal, bordered by two scales.

Four or five, rarely six, teeth in the front row of the premaxillary, the *second* withdrawn from the line of the others.

Scales deeply imbricate, *without striae*.

Highly iridescent silvery; a silvery lateral band, two-thirds as wide as eye, from humeral spot to caudal; a vertical humeral spot; a few pigment cells on upper part of opercle and preopercle. Fins hyaline, without chromatophores. Anterior anal rays of males with numerous recurved hooklets.

Many specimens, 27-49 mm. long. Tapajos.

**Bryconamericus stramineus**, sp. nov.

Head 4.5-4.75; depth 4.25-4.5; D. 10; A. about 22.

Extremely slender, elongate, the ventral profile slightly more arched than the dorsal.

Occipital process very short, about 8 in the space from its base to the dorsal.

Scales cycloid, everywhere regularly imbricate.

Straw colored in alcohol; a conspicuous silvery band; a very faint humeral spot; middle caudal rays with faint dots.

Three specimens, 44 to 49.5 mm. Piracicaba and Uruguay River.

**Bryconamericus boops**, sp. nov.

Head 4; depth 3.6; D. 10; A. 22.

Elongate, sciaenoid. Gill-rakers very short, about 8+12.

Frosted silvery. A humeral spot above the fourth and fifth scales of the lateral line; a plumbeous lateral band becoming darker on the caudal peduncle; middle caudal rays dusky; dorsal dusky except tips of first two rays.

One specimen, about 76 mm. in total length (60 mm. to base of C.). Maldonado.

**Bryconamericus breviceps**, sp. nov.

Distinguished by the short head and the small fins.

Head 4.5-4.66; depth ♂ and spent ♀ about 3; ♀ with eggs 2.66-2.8; D. 10-11; A. 20-23.

Occipital process very short, not reaching  $\frac{1}{3}$  the distance from its base to the dorsal. Suborbital covering the entire cheek; maxillary not much longer than snout, 3.3 in head.

Gill-rakers very short,  $\frac{1}{4}$  diam. of eye, 6+10.

Many specimens, about 65-87 mm. long. Goyaz.

**Bryconamericus peruanus ricaoae**, sp. nov.

The specimens from Costa Rica have the origin of the dorsal an orbital diameter nearer snout than to base of middle caudal rays. Scales 7-39 or 40-6; D. 10 or 11; A. 28-31. Eye 3 in the head, much larger than in *B. peruanus* of the same size; interorbital equal to eye.

Three specimens, 84-95 mm. long. Chitaria, Costa Rica.

**Brycochandus**, gen. nov.

This genus is a *Cretochanes* with an incomplete lateral line.

TYPE. — *Brycochandus durbini*, sp. nov.

**Brycochandus durbini**, sp. nov.<sup>1</sup>

Head 4.2; depth 3.66-3.75; D. 11; A. 27; scales 6-39 to 40-4; lateral line with pores on the first 30 scales; eye 2.4 in the head, interorbital 2.5.

Compressed slender; mouth large, maxillary equal to length of eye. Maxillary with two wide, 3-pointed teeth and about two minute, conical ones.

A round, hyaline spot equal to the length of the middle caudal rays covering the basal portion of the upper lobe. Caudal otherwise dark. A narrow, blackish lateral stripe subtended by the broad silvery stripe.

Two specimens, 38 and 39 mm. long. Rio Tapajos.

**Cretochanes gracilis**, sp. nov.

Head 4.5; depth 4.33; D. 11; A. II, 31 $\frac{1}{2}$ ; scales 8-54-3 $\frac{1}{2}$ ; (above ventrals), 5 above anal. Maxillary not reaching to end of second suborbital, its length 2.5 in the head. Premaxillary teeth  $\frac{1}{2}$ ; large mandibular teeth 5; maxillary without teeth.

Greatest depth anterior to middle of body.

Similar to *C. melanurus*.

One specimen, 75 mm. long. Rio Tapajos.

**Poptella**, gen. nov.

This genus differs from *Gymnocorymbus* by having a hidden predorsal spine. It is most nearly related to *Fowlerina*.

TYPE. — *Tetragonopterus longipinnis*. Popta.

<sup>1</sup> For Miss Marion Lee Durbin.